CLAIMS

1. Method for typing of alleles of the Minor Histocompatibility Antigen HA-1 in a sample, with said method comprising detecting polymorphic nucleotides in the cDNA or genomic nucleic acids of said alleles.

2. Method according to claim 1, further characterized in that said alleles of the Minor Histocompatibility Antigen HA-1 are the H allele and the R allele as shown in Figure 5.

3. Method for genomic typing according to claim 1 ~~to 2,~~ with said method comprising:
a) contacting the genomic polynucleic acids in the sample with at least one pair of primers, whereby the 5'- and/or the 3'-primer of said at least one pair of primers specifically hybridize to target regions comprising polymorphic nucleotides in said alleles, and performing an amplification reaction;
b) for each of said at least one pair of primers detecting whether or not in step a) an amplification product is formed;
c) inferring from the result of step b) which HA-1 allele is present in said sample.

4. Method according to ~~any of claims 1 to 3,~~ further characterized in that:
said at least one pair of primers comprises a 5'-primer that specifically hybridizes to a target region comprising the nucleotides at position 4 or at positions 4 and 8 in the HA-1 allele, or,
said at least one pair of primers comprises a 3'-primer that specifically hybridizes to a target region comprising the nucleotides at position 8 or at positions 4 and 8 in the HA-1 allele, with said positions being indicated in figure 5.

5. Method according to claim 4, further characterized in that:
said 5'-primer is combined with a 3'-primer specifically hybridizing to a target region in intron a, and/or
said 3'-primer is combined with a 5'-primer specifically hybridizing to a target region in

exon a,

with intron a and exon a being indicated in figure 5.

6. Method according to ~~any of claims 1 to 5~~, further characterized in that the primers are chosen from the following list:
SEQ ID NO 2, SEQ ID NO 3, SEQ ID NO 4, SEQ ID NO 5, SEQ ID NO 6, SEQ ID NO 7.

7. Method for genomic typing according to claim 1 ~~or 2~~, with said method comprising:
a) amplifying a fragment of said alleles, with said fragment comprising at least one polymorphic nucleotide, by use of at least one pair of primers specifically hybridizing to conserved target regions in said alleles;
b) hybridizing the amplified product of step a) to at least one probe specifically hybridizing to a target region comprising one or more polymorphic nucleotides in said allele;
c) inferring from the result of step b) wich HA-1 allele is present in said sample.

8. Method according to claim 7, further characterized in that said at least one pair of primers comprises a 5'-primer specifically hybridizing to a conserved target region in exon a and/or a 3'-primer specifically hybridizing to a conserved target region in intron a, with exon a and intron a being indicated in figure 5.

9. Method according to any of claims 7 ~~or 8~~, further characterized in that said at least one probe specifically hybridizes to a target region comprising the nucleotides at position 4 and/or 8 in the HA-1 allele, with said positions being indicated in figure 5.

10. Method according to ~~any of claims 7 to 9~~, further characterized in that:
said primers are chosen from the following list:
SEQ ID NO 2, SEQ ID NO 8, SEQ ID NO 9, SEQ ID NO 10, and/or
said probes are chosen from the following list:
SEQ ID NO 11. SEQ ID NO 12, SEQ ID NO 13, SEQ ID NO 14, SEQ ID NO 15,

SEQ ID NO 16.

11. A primer for use in a method according to ~~any of claims 1 to 10~~ for genomic typing of alleles of the Minor Histocompatibility Antigen HA-1.

12. A probe for use in a method according to ~~any of claims 7 to 10~~ for genomic typing of alleles of the Minor Histocompatibility Antigen HA-1.

13. An isolated polynucleic acid identified by SEQ ID NO 1, or SEQ ID NO 17 or SEQ ID NO 18 or an isolated polynucleic acid displaying at least 80% sequence homology to said polynucleic acids, or any fragment of said polynucleic acids that can be used as a primer or as a probe for HA-1 typing.

14. A method for genomic typing of alleles of the Minor Histocompatibility Antigen HA-1 according to ~~claims 1 or 2~~ by means of sequencing said allele.

15. A diagnostic kit for typing of alleles of the Minor Histocompatibility Antigen HA-1 according to ~~any of claims 3 to 6~~, with said kit comprising:
a) at least one primer according to ~~any of claims 1 to 5~~;
b) optionally, an enzyme and/or reagents enabling the amplification reaction;
c) optionally, means enabling detection of the amplified products.

16. A diagnostic kit for genomic typing of alleles of the Minor Histocompatibility Antigen HA-1 according to ~~any of claims 7 to 10~~, with said kit comprising:
a) at least one primer according to ~~any of claims 7 to 10~~;
b) at least one probe according to ~~any of claims 7 to 10~~;
c) optionally, an enzyme and/or reagents enabling the amplification reaction, and/or reagents enabling the hybridization reaction.

17. A diagnostic kit for genomic typing of alleles of the Minor Histocompatibility Antigen HA-1 according to claim 14, with said kit comprising:

Claim 10

a) possibly, at least one primer according to any of claims 7 to 10;

b) optionally, an enzyme and/or reagents enabling the amplification reaction, and/or reagents enabling the sequencing reaction.

18. A method for typing HA-1 alleles comprising using antibodies specifically detecting the HA-1 alleles as shown in Figure 5.

19. A diagnostic kit for typing HA-1 alleles comprising antibodies specifically detecting the HA-1 alleles as shown in Figure 5.